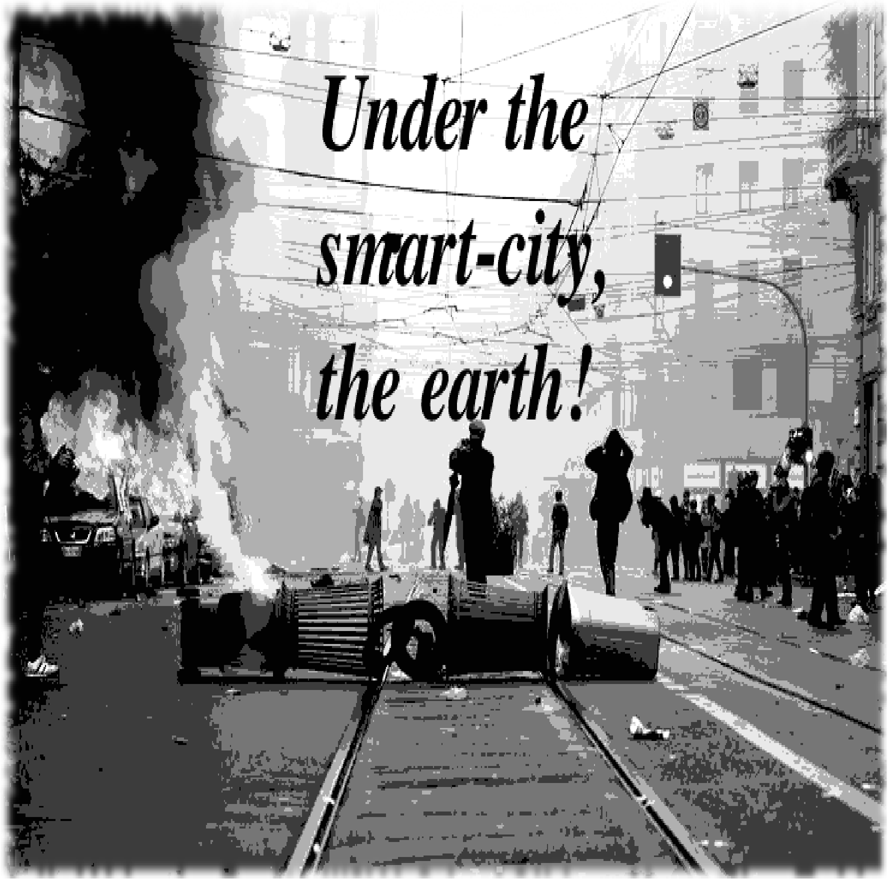
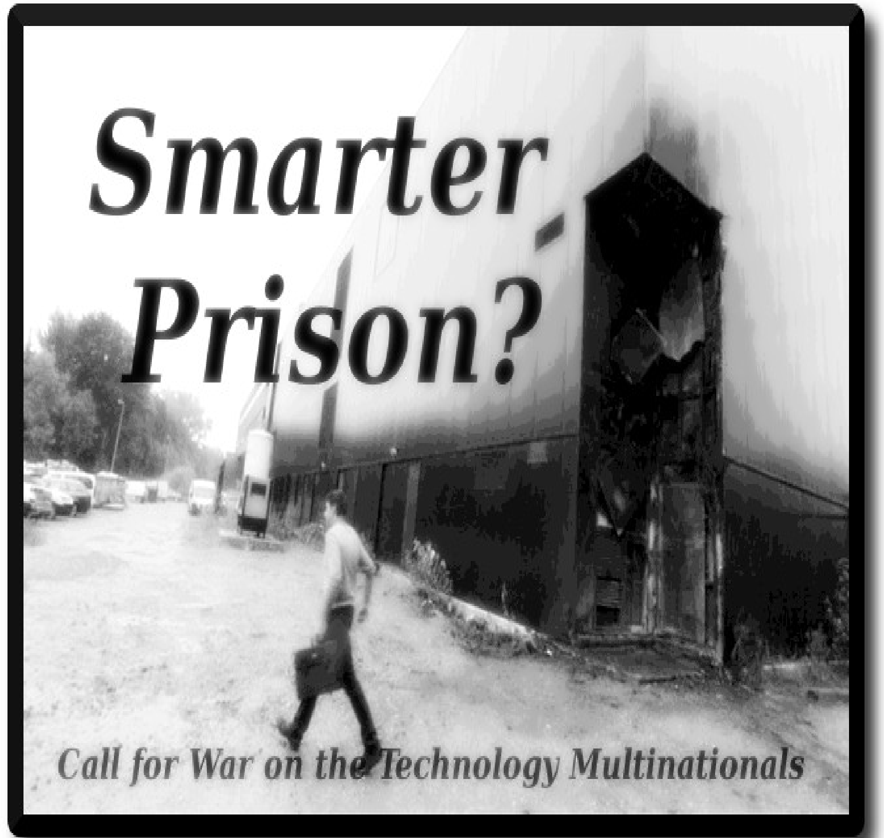




BLACK DECEMBER / 2015

[title image – August 2015: anonymous arson damages to the nano-technology research centre of the Université Catholique in Louvain, Belgium]

Send money from benefit initiatives or donations towards the legal costs of the trial against Silvia, Billy and Costa, to the postal account in the name of:
Marta Cattaneo
IBAN: IT11A0760111100001022596116
Reason for payment: solidarity with Silvia Billy Costa
Contact: info@resistenzealnanomondo.org



....“For us, even if the men of IBM and ETH boast of having a laboratory that is unique in the world – and in certain aspects they are right – the reality is that the places where the engineering and manipulation of life and the planet are being pushed forward are numerous and scattered a little everywhere. From the research centres of the multinationals to the universities, from scientific hubs to international research institutes: this world is moving parallel to the reality we know, planning and building a future that will be imposed upon us, some aspects of which we can already see around us. This world has a name and address”....
(Billy, Costa, Silvia)

break” a few days after arrest; and the corporate-scientific-state elite can never quite be sure when or where the torch will be picked up next by the rebel spirit, which dances through the prison of their cities and outposts to the beat of another drum, in pursuit of what the civilised order cannot drown out.

The wild reactions aren't going to stop.

A breath of life against the mechanical death-urge.
Shut down the system, dismantle the apparatus.

-Radical Interference

Note from *Return Fire*: We transcribed the following essay, submitted by 'Radical Interference', which unfortunately cannot fit into our upcoming Volume 3 (Winter 2015-2016)*. We are happy to see that the invitation from the Greek dungeons for a Black December campaign (to re-intensify our insurrectionary fervour while not forgetting to *“exchange experiences and rationales around various topics of struggle*”) was taken up in this form, so as to broaden and develop the offensive against modern domination. Solidarity and strength to Silvia, 'Costa', 'Billy', Marco, Adrián, Nicola and Alfredo, and to the rest of the comrades in our struggle. In the spirit of 'Avalon'; always present in our memories and active hands. Let's extend the energy of Black December beyond the New Year, through the trial that starts in January and the proposed week of mobilisation, and onwards on the path of total liberation.
Winter Solstice, 2015

** Visit 325.nostate.net/?tag=return-fire for PDFs*

INTRODUCTION AND DEDICATION IN ANTICIPATION OF THE TRIAL ON 13th JANUARY 2016

At this time, as the wheels of this monstrous society continue to grind on, and the scattered insurgents make to throw what they can beneath the tracks to slow it down in whatever way, we are left with some questions. These are questions that, in our opinion, deserve more thought and provocation than they usually assume in the circles of anarchists, rebels and land-defenders. Namely; it is clear that mobilisations (independent of any timeframe), such as those for our imprisoned or fallen, are a practical necessity in order to constitute diverse forces that are ready to face and understand the consequences of any struggle that materially contests the ruling order; in other words, so that repression lessens in its power to stop us in our own tracks.

However, before the usual propaganda and agitation that takes aim at agents or facades of the state, at the prison-industrial complex and its readily-identifiable mercenaries, the bigger question is: what exactly is captivity, today? What is domination, in its most contemporary sense? What facilitates these abominable things, which naturally our passions are also fully inclined to assault?

Scratch the surface of everyday life in the (especially Northern-)European metropolis and the territories that feed them, and the material gears that form that 'Great Cage' can still be plainly seen if you know where to look; CCTV cameras being only the tip of the technological iceberg. But already, works are underway to make the chains that bind us less immediately perceivable; yet all the more comprehensive.

In this essay, we will be speaking about a project, a threat, that, it must be remembered, has not yet come to pass in its depicted

Closing, we echo the suggestion that arose from the solidarity meeting on November 29th at Radio Blackout to designate a week (and not only) of action to highlight *“the urgent need to oppose the new totalitarianism created by techno-sciences”*, taking the trial of Costa, Silvia and Billy as a starting point, while aiming to *“not focus our attention only on the specific case of repression, but through it to convey the meaning and content that this door opens and to turn it into new possibilities for critique and struggle"*. Our contribution to the proposal is this small analysis of how the Internet of Things, cybernetic wet-dream of social control engineers, is converging with the nano- and “life”-sciences in there here-and-now, breeding an almost unimaginable potential for repression, with the maintenance and extension of this hated authoritarian and ecocidal system. Leaving us with yet another front on which to carry out the liberatory conflict we hold in our chests, guts and arms. Freedom fighters of the world, it's time to become a closed fist against the technology multinationals and their infrastructures.

For these reasons, we thought to put this out during the black December nights (a time – like always – to internationally project our intensification not only of attack but also analysis) before the trial in the New Year against the would-be saboteurs of Earth Liberation Front–Switzerland. As these short evenings draw in, nourished by antagonist fires, banner-drops, riotous assemblies, and messages exchanged like winks across the continents, our thoughts fly over the Atlantic to another warrior of the Earth Liberation Front, ten years since his death in custody. Bill 'Avalon' Rogers was implicated by the American state (and snitches) in a generation of liberatory action whose rage scorched techno-scientific research centres of earth and animal exploitation across the country. Avalon made his “jail-

technician who, though profiting from the technological toxification of the earth, will from forever on walk with a limp. The expositions and propaganda of the developers can be undermined and ridiculed, techno-positive attitudes can be challenged and countered in our own social surroundings if there seems a worthwhile opening for fruitful subversion. There are the supply chains also for fuel or machinery as well as energy and data (which are still not as "smart" as they'd like you to think when it comes to disturbance at their bottlenecks); and there is the need also to defend and foster the sensibility towards what is for once truly connective, empowering and eco-logical – our ties within the superstructure of a healthy and diverse landbase, encouraging and living out a wild trajectory of defiance and de-civilising, with the devices cast aside and their would-be components left in the earth. Hard though it may be for many of us to kindle any kind of significant ecological connection in our daily urban lives, nothing else seems to us to have given the life-long impetus that could sustain us in tension against the existent without embittering and rotting us from within.

These words are nothing new. And of course, neither are we making a reductionist call to drop all struggles but those against the technological systems (or indeed, these specific branches of the above). Such an analysis has always struck us as quite naïve as to the deeper nature of alienation and civilised power structures which we (all?) want swept away. Besides, naturally, our comrades will do what they want.... We'd simply ask those with a mind for the kind of liberation we seek to think carefully about what forces currently pacify and dis-ables much of the population, and what forces will come up against any kind of struggle if it even begins to gain ground against the authoritarian leviathan. More and more, it is and will be those of the techno-sphere.

scope. This carries not a few problems; the techno-critical sphere is already frequently wracked by morbid fascination with the most fantastic projections from the mouthpieces of those developers of domination. A potential fault of this over-activity of the imagination is a kind of self-paralysis, and the needless spread of debilitating fear among those with whom we are reaching for through our publications and communiques. Basically, falling for the hype of techno-science, and acting as if the worst were already here, we terrorise ourselves and those who would like to act – often at the expense of adequately assessing the technologies that are already with us, and studying their flaws and openings for disabling. This detrimental habit is augmented by a deleterious hostility towards the critiques of technological-industrial society, that is still sadly shown by many sectors of the more-or-less radical oppositional tendencies of the world.

With this in mind, throughout what follows, the strongest impression we would like to impart would be – cracks still exist in the walls that surround us, and will continue to.... if we seek them out and force them open. As the glut of action from all across the world in this month alone shows, and from a wealth of perspectives and targeting, the attack is not only feasible, but ever-present. The reason we find it important to dedicate this amount of words to the topic in hand is, simply, that these spaces for insurrection and creation are however diminishing, and it is (understandable fear of) the technological apparatus of modernity and its powers of surveillance, regulation and investigation that is largely responsible. In fact, history regularly teaches us that once designed and perfected, it is usually a matter of time before any given innovation in the hands of the ruling order is deployed to its full and repressive potential; to the degree that the rulers can afford and believe they can get away with. The question is when, not if.

Moveover, if we take a deeper view of technological systems, as being culturally manifest also through the behaviour and conditioning of their human conduits, we can see that the populations in many parts of the world are becoming groomed and prepared to accept (if not actively carry out) what we at least see as great challenges to our rebel drives in our times. Thinking back to how proletarianised the unfolding of the industrial revolution, urbanisation and pacification of the last few centuries has already left us, a prime concern for those who value agency and ability apart from the cloying traps that are set in our way must be to prevent an even more profound disempowerment.

Thus, we're conscious of the risk of hyperbole, but convinced that ours is the challenge to go up against the transforming field of domination, before we are overrun. To see, with clear eyes and a ready hand, what we as excluded, deskilled, but most of all as aspiring oppositional forces, are and will be faced with.

Furthermore, we are considering this topic at a time when Costantino 'Costa' Ragusa, Silvia Guerini and Luca 'Billy' Bernasconi are soon to stand trial together for the second time. In 2010 they were intercepted by the forces of law as they went equipped, as Earth Liberation Front–Switzerland, to attack the nano-technology centre that IBM (a global computing major) were then building with the Federal Polytechnic University of Zürich. Now back in Italy following years of incarceration, inter-prison hunger-strikes and lucid defiance, they will be prosecuted, on charges with “terrorism” enhancements, for preparing for that same explosive/incendiary action from “Italian” soil. All three have not stopped defending the necessity of direct action against the expanding techno-sphere, whether during the Swiss trial or upon release and deportation.

What can it mean to fight against such monstrous entities as those announcing the Smarter Planet? Some of most advanced plans for that Brave New World are already playing out in purpose-built urban areas of South East Asia (Singapore, South Korea etc.), but it would be a mistake to think that to be how it begins in earnest. That's the abstraction which blinds us to what is right before us, which portrays technological development as somewhere at which, far from our everyday lives, the deepening of control is refined.

In actuality, the advance of technological-industrial society is spread across the whole terrain; neither is it limited to the hi-tech industrial zones (Silicon Valley, the Grenoble MINATEC, the Bristol-Bath design cluster) but rather diffused within innocuous departments within countless universities, regional company offices, hosted and trialled at public events, devised on the web and relayed by pylons, unfolding in urban or rural mapping and crowd-sourced innovations... In short, the laboratory is the whole metropolis and its outlying colonies, namely at this point most of the globe.

Sometimes we won't all have the coherence of blows to the devoted research and development facilities and other towers of techno-science. We're not only thinking of the attacks on bio-tech propagators in Mexico; we also cannot but think of the past disruption to the veins of transnational electrical power transmission, in the Alps and elsewhere, which speed this world towards its objectification and annihilation. We're thinking that for every corporate headquarters or informational hub that can be sent up in flames, there's miles of fibre-optic channels servicing business and industry while drip-feeding opiates to the masses and carrying away the prized data in its wake; while for every sabotaged surveillance node (cameras, mobile phone towers, travel card readers) there's a high

IX

Now would usually be the time when a text like this would flip to the exhortations, pep-talk or subtle coaxing. And, we won't deny, we are writing in part because of a desire to reach beyond what we already know, to find those who, like nascent fireflies in the long night, will take from these words something close what we tried to send out in them; or just to see what happens or echoes back. What we won't be professing to, however, is a prescription for the struggle and the future, a blistering analysis of the weakest points of the system, a designation of the “objective” strategy for “revolutionaries”. We don't know if the opportunities to seriously contribute to a destabilisation of technological-industrial society can be realised by us and others like us, but what we see in our daily lives and take from (unofficial) histories tells us that the dominant order is never as stable as it portrays itself.

In fact the alleged permanence of the technological infrastructure rests on a self-image of it as at once ephemeral and invincible. Ephemeral, in that we are not taught and probably cannot understand the full workings and interdependencies of the regional, national and international networks and flows which perpetuate the dominant order as we know it; and in the age of the Internet of Things, even the visible components seem to be disappearing into the ether. Invincible, in that the artifice which it composes seems all-powerful, ever-present, and most of all valued and cherished by a large part of the population in the “developed” world. But – just like the hi-tech gadgets of our times need the minerals and processing that despoils the face of the planet out of direct view from the metropolis – the networks and processes themselves rely on physical infrastructures; on cables, wires, antennae, receivers, screens, servers, programmers, engineers.

Like them, we want to see the active celebration (and thus, defence and extension) of what is still wild in this world expanded to include what is profoundly and immediately threatened by the latest technocratic toxicity, broadening the usual rubric of “radical-ecological” discourse; and it is to Costa, Silvia and Billy that this text is dedicated.

....“Nano-biotechnologies are the latest path beaten by the techno-industrial capitalist system in the plunder and devastation of the Earth. These paths, like all the previous ones (think of the Industrial Age), are presenting as miracles what we can easily imagine are destined to turn into nightmares. These technologies are born from the new vision of the world of the computer era that has substituted the mechanistic one of levers and gears with a mathematical one of information bits, where the whole of reality must fit into one algorithm. This new vision has now taken root as it is more suited to the needs of the present system. In asserting itself, it has opened up hitherto undreamed possibilities for science to carry out what the moment and self-cannibalism of the system are urgently pressing it to do: appropriate everything in the universe and break it down into its smallest, infinitesimal components, into ‘bits’. In other words, to achieve some universal basic unit with which scientists can reduce the whole of the existent to a level of interchangeability and equivalence, so that through the engineering of this new (inaccessible up until now) raw material it will be able to make anything in the universe usable for the needs of power. These technologies are therefore the pillars upon which the system will be able to re-arrange the processes of production and supply that are vital to its growth, a growth to infinity on a planet that has already been plundered beyond the limits of its possibilities. And, as in the case of GMOs [Genetically Modified Organisms], the convergence of the sciences is the latest promise of a development trend that is supposed to tackle the ecological crisis that ecocidal progress itself has taken us to”....

(Billy, Costa, Silvia)

....“There are some of us made with a defect, that of not being faithful to the machine”....

(Adrián Magdaleno, earth and animal liberation prisoner held by the Mexican state)

Whether this is likely or even possible is a moot point to us. Come what may, our adventure consists of reaching out for it, and knowing that by doing so, our lives will be complicated in the process, but undoubtedly enriched. Aldo Leopold may have been right to assert that the curse of bearing these kind of dreams is to be so acutely aware of "living in a world of wounds", yet beyond the grids of oppression and alienation criss-crossing our lives, we can taste traces of the freedom we pursue. Striking the matchbook of our rebellious thoughts against the high walls of the existent, that the passions may catch alight... Meanwhile, we'll be the ghosts in their system, evade the gaze of the security apparatus, and enter the field of technological advance, not to debate, but to materially oppose. If the totalitarian lockdown of the Internet of Things is their vision of the future, another vision has ignited our minds.

I

Innovators in the computing world are promising a new industrial revolution in the coming years. One that would transform science, technology and society – indeed, even the biological reality of human being on the planet. A planet whose organic flows and cycles are already totally reeling and undermined with catastrophic effects, exactly due to the cancerous way of life which resulted from the last industrial revolution. Nano-technology, the applied science of manipulating matter at a scale that is far past microscopic, plays an indispensable role for the emerging era. Beyond redesigning the gene structure of living creatures, techno-science also now redesigns the molecular structure itself to give new forms and materials. At the nano-level, entirely different properties and reactions (for example those of say, gold) come into play than would have when in molecularly-undisturbed forms. The hopes of the industrial leaders are in the wide range of new applications and abilities that nano-scale modification can bring to almost any matter, from manufacturing incredibly light and strong metals, to injecting nano-machines into the human blood stream to treat the diseases of civilisation, to synthesizing fuel sources. Add to this the predictions of being able to "edit" living DNA, as well as radically redesign current objects and processes, and the outpouring of homilies to this-or-that novel structure of the near-future are never-ending.

One of the more tangible widespread applications of nano-technology (which, despite the horrific implications and cataclysmic predictions you can easily find in a short web search, mainly has thus far remained temporarily in the field of cosmetics, sprays of nano-particles for automobiles, anti-bacterial screens etc.) is in the field of computing. Albert Swiston, of the Lincoln Laboratory, made the following predictions on the future of computing and nano-tech:

....“You might look at a future where you don't have computers at all. The computing power you need is just woven into the fabric of your shirt, or maybe it is in your ring, or your watch. Maybe that device connects automatically to some screen next to you, or some projector you carry with you. Maybe you won't even need a display - it will just get piped straight into your eyeballs”....
(Albert jointly led a project to infuse micro-particles with nano-crystals, invisible to the naked eye, to combat counterfeiting of currency, luxury goods and electronics, to protect the flows of wealth and capital.)

The major corporations in the computing field have been working at the nano-level for many years; certainly not limited to the aforementioned torch-bearers at IBM. To take Hewlett-Packard as another example; the nano-technology team of their advanced research arm HP Labs boasts a long history of scientific breakthroughs, major patents and seminal publications in its field. Nano-mechanics are a main area of interest to HP Labs; they are developing ever-smaller and more sensitive micro-mechanical sensors and actuators. They pride themselves on blazing a trail for computing beyond the silicon of conventional electronics into the realm of molecular-scale electronics and nano-scale structures with whole new properties and applications. But what does all this mean, beyond faster operating systems and communications?

pills that monitor your health, sharing data with insurance companies and employers – not everybody is going to be happy about that”....

Already menaced by a sterile urban environment that bears hourly upon us, where most surrounding humans are less attuned to the feel of the grass, the wind or one another than to the keypad and screen of a device, we're with the ones who don't accept the path that technological-industrial society is trying to herd us down. We'll firmly state: we do not believe that reaching for the supposed “post-ecology” world of nano-scientists and transhumanists would be anything but a disaster, because humanity is inseparably meshed into circular energy transfers (beyond machine calculation) that bind us to other animals, plants, regions – and by disregarding this basis of existence, civilisation has already placed biodiversity itself in jeopardy on earth. We do not let them distract us with the benevolent faces that the technology sometimes wears; when not addressing entirely manufactured “needs”, they are almost all false or at best temporary fixes for problems that are caused by social organisation and manouverings of the powerful – not a lack of technology.

They try to structure our world to need their machines. We try to live differently. We have our own desires, another direction for what surrounds us, and it's not the European Green Capital model (which this year was held by Bristol, coincidentally home of the European headquarters of HP Labs). Our dreams are of shoots breaking through the asphalt and curling around the ruins of the office blocks. Shrubs breaking out in the empty space of old fuel depots and garage forecourts, streets re-populated by the wilderness; us and fellow species who were once banished or contained. Together, us all breathing free from their poison, without the non-stop noise of auto-engines, until the day we hear all birdsong and no traffic.

citizen participation while only raising the profile of an innovation and, finally, strengthening its acceptance. The corporations seem confident that, if there might be little or no demand for this new network among the population, demand can always be manufactured, like so many times before (for the junk that already surrounds us and piles up discarded in oceans and landfill), and that the masses will be swept along and, in the end, embrace the new technologies.

The point that should be obvious, is that all this drive to make the world "smarter" is in fact achieved by making the human "dumber", the battery running the gadget, nothing more. Do we want our judgment, intelligence, sensations and, ultimately, our ethics to be "outsourced" and automated? Because this is precisely what the transformations we have been undergoing are leading us to, to the diminished capacity to break away from the standards and norms that are prescribed and encoded in the technologies which we are encircled by.

Still, there's always room for an opposite approach to the cordial discussion with experts and lobbies that is the favoured terrain of these profit-driven industries, who go so far as to portray themselves as benefactors of humanity; a concern we can read in the words of Sam Palmisano (during 10 years at the head of IBM):
....*"Think about the prospect of a trillion connected and instrumented things – cars, appliances, cameras, roadways, pipelines... even livestock and pharmaceuticals. And then think about the amount of information produced by the interaction of all those things. It will be unprecedented"*....
....*"From new models of technology... to the changing form of the corporation… to the changing role of the individual in modern life… we are entering a very different world"*....
....*"But the idea of computer chips in your body, swallowing*

....*"First, our world is becoming instrumented. The transistor, invented 60 years ago, is the basic building block of the digital age. Today, there are nearly a billion transistors per human, each one costing one ten-millionth of a cent. There are 4 billion mobile phone subscribers, and 30 billion radio frequency identification tags produced globally. Because of their increasing sophistication and low cost, these chips, sensors and devices give us, for the first time ever, real-time instrumentation of a wide range of the world's systems – natural and man-made, business and societal"*....
....*"Second, our world is becoming interconnected. Very soon there will be 2 billion people on the Internet. But that's just the beginning. In an instrumented world, systems and objects can now "speak" to one another, too. Computational power is being put into things we wouldn't recognize as computers. Indeed, almost anything – any person, any object, any process or any service, for any organization, large or small – can become digitally aware and networked"*....
(Sam Palmisano, while CEO of IBM)

II

Many of us will by now have heard the term “the Internet of Things”, used to describe a budding environment that the technology corporations want to make wider reality. An omnipresent exchange of data between an untold amount of receivers and transmitters, potentially spanning all materials and processes that can become measured electronically. Most significantly, it is the relationship between *sensors* (that gather data) and *machines* (that act on that data), all at newly microscopic sizes, promising to make everything from streetlights to seaports “smart”. It's been picking up steam in recent months, and indeed although the implications are nearly incomprehensible, it is being treated as the logical next step for technological-industrial society, generating a multitude of new products and services as all kinds of devices and algorithms come to mediate daily life. After all, we have already come to rely less on a conscious relationship between each individual and the make-up of our living surroundings, and more on what a lifeless digital display conveys to us. Work, “free time”, travel, education, politics, shopping, intimacy – everywhere the screen, and the space between gets lessened all the time.

The Internet of Things is a *proliferation of electronics*, primarily implanting micro-chips directly into objects, bodies or the wider environment. This is part and parcel of the vision that IBM are known for despicably calling a Smarter Planet. Smarter, not in the sense of intuitive, relational wisdom that is formed through the experience of an engaged co-existence, on and of the earth we inhabit. But in the sense of a sterile, calculated machine prediction, filtered through statistics. To this end, (and with considerable support from governments and industry,) the technology corporations want their sensors to densely inhabit everything from cities and commodity supply chains – which they euphemistically term “ecosystems” – to

VIII

From our experiences, it seems clear that a great amount of technological advances do not allow you to “opt out” for long without the threat of great social disadvantage. We are almost all now practically forced to use computers in at least some parts of our lives, as just one example, because society has completely reformed around their existence; for jobs, bureaucracy, commerce and “culture”. (For example it's hardly uncommon these days for an prospective employer to decide whether to give you a job based as much on your social media profile than the interview.) The Internet of Things, Central Nervous System for the Earth, Ambient Intelligence, Augmented Reality, Smarter Planet or whatever you can call it will take this principle to another level, because we will have no control (and often no actual knowledge) of who we're communicating what information to, or when.

Nina Turner, a research manager at IDC, notes that:
.... “*the key thing with IoT [Internet of Things] is that it's not going to happen on a certain date. It's going to grow gradually as people understand their systems better; as they do trial implementations, adoption will increase*”....
Behind the warped implication that “the people” will simply choose to try out this ultra-specialised technological environment of their own initiative, the blackmail seems clear: collaborate or be left behind, and then overrun.

While we're being eased into the idea of components from that Smarter Planet being immanent, by billions in advertising and by the mass news media, debates will crop up on occasion about the ethics of this or that individual part of it. The scientific establishment had learned from the backlash against Genetically-Modified Organisms or, before that, round-one of nuclear power, and now knows how to give the impression of

....“If they are compared to the technological progress of the past centuries, these new experiments are very fast and can deeply transform our society. Moreover they are not carried out in secret underground laboratories protected by barbed wire. Certainly such laboratories do exist but they are not the only ones. Global dominion decentralises its death creations in numerous research structures, be they private or public (universities, national research centres, etc). It is not that a single structure is responsible for the realisation of lethal weapons or sophisticated instruments of control; on the contrary many centres work on such projects each contributing to parts of them ”....

....“The link between industry and research is strengthening through investments, collaborations, and common projects concerning universities, research centres and companies... but in order to create what? Why do these technologies proliferate? No technological development can exist without a tenacious work of persuasion that makes it possible. Fomenting fear is crucial in this context: security reasons, threat of possible ‘terrorist attacks’ with biological weapons, defence of national borders create the right atmosphere of consensus to shameless technologies of death and security systems that suppress freedom. Perhaps the time of the cold war is not so distant and perhaps it has never ended. Is there anything more devastating than nuclear weapons to be used against neighbouring countries? Prestigious scientists all over the world are working on that, especially inside the ‘harmless’ public research structures that do not need any barbed wire”....

(Terra Selvaggia)

actual rivers and forests. As well as detectors to automatically operate the heating and air-conditioning when people enter a building, soil sensors that communicate to farmers about water or fertilizer levels. Nano-scale devices in the atmosphere to predict the weather, in bridges to better monitor the state of the cement, or to tag and track what's left of the wildlife, all with completely unknown/irreversible effects in the long-term from micro-particles spreading through and accumulating in the environment and inevitably in the food cycle – this is what Dr John Manley of HP Labs Bristol research base had the gall to call the Central Nervous System for the Earth. It is nothing but an acceleration of the patriarchal and exploitative cultural ethos to become master over the biosphere – which we are bizarrely considered a separate part of – in order to perpetuate the insatiable industrial system and way of life that is despoiling the globe, even at the cost of wiping out the source of our and all existence, and to ration everything into food for the system; grist for the mill, of this prison we could call civilisation.

In a situation like today, individuals no longer generally use technologies they themselves have formed and understand to create the lives they choose, but are ruled by and through technologies – that capitalist-industrial society uses to reproduce itself and to acculturate them. The accompanying alienation and surrender to industrialist logic makes the depth and complexity of the element, plant-animal and energetic worlds seem daunting; because despite the interrogations of modern science, they are not reducible to reason, or indeed to static categories. To the ones who want to gain power over others (human and not), it's very much in their interest that we are further indoctrinated into their culture where the chaotic majesty of the planet has pretty much lost all meaning – and only the technologies to re-interpret life back to us as images, products or services come to make sense.

III

Hence when we make reference to some movements in this technological society as “advances”, we're not talking about developments and machines that are inevitable, beneficial or indeed neutral in the way that it is generally portrayed. Rather, we mean the material deepening of a specific ideology – something closer to the invasive spread of an occupying army. We could call this occupation, following the words of its own propaganda, “Progress”. An ideology that dictates social existence and affects all our lives with its values and impositions, leaving us non-adapted to the actual earth we live upon, and reliant instead on the governing system. The centuries-old ideology uses concepts specific to the technological forms of the period, which emerges in our basic idea of how the world exists and is implanted in our actual self-image; the *zeitgeist* of the era, as it were. The heart = a clock. The brain = a computer. And now, as we mature further within the cybernetic age, the city = an organism. The focus in all these cases, past or present, is the penetration of predictability and control into every sphere that can be dominated and colonised by automation, sold as inevitable or even “natural” under the aforementioned guise of Progress.

With the Internet of Things, the ideology now speaks of each part of life as a socket to be plugged into and mined for data – made predictable and hence manageable. Rob van Kranenburg offered a (rather limited) critique and analysis some years ago: ....*“Electricity was the actual metaphor that the EU 1st project officer, Jakub Wechjert, used. He spoke of a vision of the future is one in which our everyday world of objects and places become ‘infused’ and ‘augmented’ with information processing. Computing, information processing, and computers disappear into the background, and take on the role more similar to that of electricity today – an invisible, pervasive medium*

Development and Partnering, Tony Boyle, stated in his report back from the conference that his company *“provide capabilities at a national level as well as overseas, safeguarding critical elements of UK’s defence and security apparatus. This means we also protect businesses across the globe.”* (For example, as well as using RFID in the UK to track some parcels sent via postal delivery, they also to monitor on-site “assets” for UK military bases.) As well as having delivered the keynote presentation on using the Internet of Things in the battlespace, and plugging the importance in military terms of cloud computing and predictive analysis, he issued an invitation to the Defence and Security Equipment International (DSEI) 2015 arms fare in London, where BT was to *“show off”* some of the *“new solutions”* they'd been working on.

Today, with growing instability and while borders and markets tighten like a noose, the military take on more civil policing functions than ever, and many sections of the police themselves become more militarised. In such an environment there is a sobering quality to the idea of the kind of brutal disconnection that would be in the hands of the army (or other authoritarians) who wanted to escalate control an area; judging from the precedent of, say, the deliberate targeting of hospitals and other civil infrastructure during and after the first Iraq War, a Smart City (or Town, or Countryside) used offensively could be deadly like never before.

VII

If the applications of hi-tech at the Future Food District seem trifling and perhaps a little remote from what we are seeing at a more daily level, you can be sure that the militaries of the world have for years been playing with much more intricate and powerful versions of whatever then trickles down to the civilian market once it has been re-packaged for commercialisation (microwave ovens and the internet itself being two examples of this repeated pattern throughout the 20th Century; and nano-technology having been requisitioned for missile systems since early stages). Indeed the armed forces have almost always been the first to benefit from technological capital in expansionist cultures. Once again, we find the same corporations churning out innovations in the field: HP over the years has been among the top contractors of arms and other military services for the Pentagon (and indeed the world), and in 2006 became the firm with the largest investment in hi-tech for Israel's police and military; specifically, let's mention, such as through the biometric ID card and checkpoint BASEL apartheid system of global infamy. To take another clear connection between the Smarter Planet model and its camouflage-green version; the HP Labs project with the US Army for a flexible wristband mini-computer was announced as possibly being somehow applicable for hospital patients at some time in the future, to sweeten the deal... Whoever still doubts how bad it would be, might refer to the track record – it's clear what to expect from allowing their developments to fester.

The Internet of Things was a theme that stretched across all three days of the NATO Armed Forces Communications and Electronics Association conference in Madrid this summer. Astutely noting the relationship of armed force and big business, the director of BT's Global Services Market *distributed on our real world. In contrast, what will appear to people are new artifacts and augmented places that support and enhance activities in natural, simple and intuitive ways"....*

....“We are witnessing a move towards pervasive computing as technology vanishes into intelligent clothing and wearables, smart environments (which know where and who we are) and pervasive games. We will see doors opening for some and closing for others. Mimicry and camouflage will become part of application design. iPods will display colours and produce sounds that correspond to your surroundings. Eventually they will come with a “kill switch” that, for example, that will automatically lower the volume when you are on a train. Mobiles will react to their environment too, shutting themselves off when they detect that they are in a restaurant”.....

The billions of tiny electrical prostheses are to constantly collate information to then transmit to other devices in their surroundings, or to databases where it is stored and analysed to identify possible causes for notification or automatic intervention. We ourselves are to be centre-stage in the constant assessment – our routines, our associations, our interests, our behaviour. And so you can read from the presentation prepared by Ruth Bergman (director of HP Labs Israel) and Mike Shaw (HP Strategic Marketing) for the HP Discover convergence in Barcelona, to make absolutely clear the transformational changes afoot, in which they're critical players:

....“Imagine your mobile phone could recognize your facial gestures, the tone of your voice and the patterns of your brain waves. It would then have a good idea how you were feeling. It could then couple this with a “personal big data” store of information that it has built up about you – how you like to receive information, how you like to work, how you like to travel and how you like to take your leisure”....

....*“What about big data analysis to control the entire transportation system, the policing and the environment of a city of 30 million people? And how about a big data system that is able to control your world-wide marketing campaigns for you, adjusting the pricing and packing mix right down to the neighborhood level based on real-time analysis of detailed structured data and social media sentiment?”*....

(In the time before this convergence, HP bid on a contract to be a main supplier of servers or storage equipment – as they successfully did already in past years to provide surveillance systems for Syria to target dissidents – for a project called Peaceful Chongqing, a plan to install roughly 500,000 cameras throughout the former Chinese capital, provoking protests that it would target political activists; as if that was the only thing to be worried about. This would be possibly the largest single video-surveillance projects in the world, over an area 25% larger than New York.)

Discrepancies between your actions, movements, consumption etc. and what is considered your norm by the statistics would come to light in such a network – even more-so than in the present online culture (including travel cards, contactless/electronic payment, mobile phone signals...). Pre-emptive police operations, counter-fraud techniques, racial profiling and surveillance of welfare recipients would gain new meanings. Actually trying to exit the digital cage would flag you up, sophisticated spy-ware (in a guise that many already actually see as beneficial) would encompass every available aspect of our lives.

For example, the online franchises have already proved exceedingly effective at normalising, and quietly capitalising from, a degree of one-way transparency in the lives of many, as

All of this is particularly unpalatable for those who are conscious of the consequences brought by the pile of technology applied to life and environment: more power to corporations and lobbies which constantly address the institutional policies and regulate the buffer between public and private; more delegation to a social body made of self proclaimed “experts”, like scientists, businessmen and stakeholders, in depletion of other kinds of knowledge and freedom; more exploitation of life in all of its forms, considered as the mere subject of an experiment, appealing to an idea of science as neutral and in the service of Progress; more legitimacy lent to research, extraction and production, and the trend of extending their range from the daily meal in our homes to intact uncivilized areas, still-wild earth and seas”….

(It should be mentioned here that the reception to EXPO2015 in Milan was marked by rioting and destruction at the first of May counter-rally; and that in addition to the Italian nationals facing charges from the incendiary clashes, a process is currently underway to extradite five charged from Greece as well.)

Energy for Life"; in reality, just advertising pitches attuned to the popular concerns of the moment. Of course, this "augmented reality" has need of its salespersons at present, following the rule that new technical endeavors are introduced in idealised terms by the people who stand most to gain. It's reminiscent of the 1939-1940 World's Fair exposition in New York, when American industry promised a near-future of transportation by individual jet-packs, eradication of disease, the disappearance of all slums and blight in the cities, computers and automation eliminating toil, and thus free us to pursue "higher goals"... The specifics of that obviously didn't emerge, rather the following tendency was and is strongly towards control and not emancipation, and the modern equivalents follow exactly the same logic and interests with the same beneficent facade (although seemingly confident that mainly lesser and more individualised promises will still win over the technological addicts of today). Additionally, the Milan EXPO (just like the HP Discover in Barcelona, like the San Francisco Bay Area, like Seattle...) can be seen in the light of ongoing gentrification of these cities by the presence of the hi-tech sector, among others:

....*"This miniature model of a world subjugated to machines and a brutalized daily life, called Future Food District, hits another important target aimed by the organizers, like the institutional and commercial partners of EXPO2015: it is a fundamental element for the City of Milan and the Lombardia Regional Government economical policies, a launchpad for the model of the "smart city" they want to sell during the next Tourism Expositions, a place where it will be possible to experience and practice the "augmented reality". As the result, it will be a city modeled on tourism, a urban area designed for fleeting experiences, mediated by a pervasive technology and an environment organized for the primary needs of informatic communications.*

analysed by some (differently-inclined to ourselves) critics of the cybernetic system:

....*"Behind the futuristic promise of a world of fully linked people and objects, when cars, fridges, watches, vacuums, and dildos are directly connected to each other and to the Internet, there is what is already here; the fact that the most polyvalent of sensors is already in operation: myself. "I" share my geolocation, my mood, my opinions, my account of what I saw today that was awesome or awesomely banal. I ran, so I immediately shared my route, my time, my performance numbers and their self-evaluation. I always post photos of my vacations, my evenings, my riots, my colleagues, of what I'm going to eat and who I'm going to fuck. I appear not to do much and yet I produce a steady stream of data. Whether I work or not, my everyday life, as a stock of information, remains fully valuable"*.... (Google Dégage)

IV

A major problem so far for the overseers has been devising ways to sort through and isolate the relevant information for any inquiry in particular, rather than drowning in a sea of raw data, as is often the case at present (hence enabling some of us to evade and resist even though confronted by a gigantic control apparatus). It's towards overcoming this that much energy in the tech-world is now spent – for the program to *"fundamentally re-design computing to handle the enormous data flows of the future"*, to quote the professionals at HP Labs, which over half their engineers are now dedicated to. As a taste of what this could mean, consider the award-winning IBM predictive software developed and applied by their "SouthWestOne" collaboration with British cop and council authorities to police potential thieves in Avon and Somerset, or that the British Ministry of Justice applies to convicts who come up for release. In working towards the vision they described above – which in many cases the technologies already exist for on a smaller scale – HP like the rest talk candidly about how social engineering, behavioural psychology and crime prevention also mesh with the rise of what they're calling a "cyber-physical environment", and the citizens it would produce.

In 2014 alone, HP Labs put out an in-depth survey to improve facial tracking and identification technology for *"monitoring cameras installed in public areas, schools, hospitals, work places and homes"*, and the same day they published another co-authored study on algorithms applied on social network sites to discover relationships, to predict behaviour, *"to exploit mutual influence and mutual benefits between social actions and social ties"* (quotes from the papers' abstracts). On this last topic, we're reminded of the media stories during the summer of 2014 about Facebook tailoring the news items that appeared

the individual. What, at a first glance, may appear as an expansion of the ordinary experience, is in fact the deprivation of the individual perception of each human sense.

Individual choice, made through our senses – or what's left of it since the intervention of industrial, colored and packed products on feelings, thoughts and reactions – will be almost erased, inside the augmented reality process, in order to focus all the attention on a framed image filtered by pixels, applications and, in general, technologically mediated representations of the outer world.

Furthermore, through tablets and smartphones, the individual will lose the experience of smelling, of touching, or of perceiving real colors; the experience mediated by an electronic device will be edited by psychology and marketing experts, working together inside corporations' advertising departments. This is the description of experience pictured through technological processes, not direct reality. A picture which is given without any chance of checking and questioning by the final user, because the information flow between the two devices, the input-output process of sent-received data, is predetermined by the companies themselves.

So we have the same act of selection made since the birth of food as a supermarket good: as some products, evaluated as uneconomical or unsuitable for the shelves are trashed or segregated to the lower market, and the information evaluated by the manufacturers as being negative for selling a product or for its representation on the market are excluded from the data flow through those devices"....

All this was only one corner of the overall event of EXPO2015, within its ambitious broader theme of "Feeding the Planet,

industrial ideology's founding elements has a name and a precise position inside the event: the Future Food District. It will the "supermarket of the future", quoting those who worked on this project for a long time: COOP Italia, a big distribution brand that commissions research on food to its providers for products sold with its brand; Boston's Massachusetts Institute of Technology, since decades committed to research for the military and industrial apparatus; Merieux NutriSciences, a corporation focused on food-safety and research on sensory marketing linked to consumer practices.

This is going to be a setting with a lot of focus on the details, where the people's thoughts, behaviors and choices will then be predictable and monitored, biased by the design of the structure and pervasive technologies within it.

3D-rendering, press agencies, and videos already show us what is going to happen inside this Future Food District: the consumers (tracked in their movements and choices) will experiment with shopping through so-called "augmented reality", through something more than biological senses and collected information, an experience of the ambient environment manipulated and mediated by smartphones, tablets, gloves, earphones and cameras; the economic transactions will be through the inevitable credit cards or cellphones, interfacing with screens and robots, using computerized trolleys which are built to become "relational bridges" between costumers/clients/tourists, using technologies that remind us of the RFID tagging inside the extensive ocean of the "Internet of Things".

A dangerous phenomenon of the use of "augmented reality" is insinuating inside the psychological and sensory processes of

on users' pages, then gauging the results in online activity to experiment with mood-induction through that hideous and all-pervasive site.

Road traffic, which is expected to continue soaring over the next few decades (and continue befouling everything), is one field in which the micro-management of social control is deepening. European Union officials have considered legislating that all cars entering the market should feature a built-in mechanism that allows police to stop the vehicle remotely, but the preferred option would seem to be simply preventing unwanted behaviour before it even occurs. "Smart roads", with some 400 miles planned in the UK, would be those such as the A14 in England between Felixstowe and Rugby. They are to be equipped with numerous sensors – to be arranged through BT (British Telecom) exchanges – that would monitor traffic by sending signals to and from mobile phones in moving vehicles; hence, enabling a centrally-controlled traffic system to divert routes or manage their speed (in the case of new vehicles, potentially by overriding the controls). Of course, GPS (Global Positioning Satellite) already comes as standard in many automobiles, leading the senior Ford executive Jim Farley to boast that *"we know everyone who breaks the law [while driving], we know when you're doing it."*

Elsewhere, you can read in the media about the fact that *"thanks to sensors and internet connectivity, the most banal everyday objects have acquired tremendous power to regulate behaviour. Even public toilets are ripe for sensor-based optimisation: the Safeguard Germ Alarm, a smart soap dispenser developed by Procter & Gamble and used in some public WCs in the Philippines, has sensors monitoring the doors of each stall. Once you leave the stall, the alarm starts ringing – and can only be stopped by a push of the soap-*

dispensing button. In this context, Google's latest plan to push its Android operating system on to smart watches, smart cars, smart thermostats and, one suspects, smart everything, looks rather ominous. In the near future, Google will be the middleman standing between you and your fridge, you and your car, you and your rubbish bin, allowing the National Security Agency to satisfy its data addiction in bulk and via a single window.”

Indeed, the creep of electronic leashes tightening isn't anything futuristic, but has been upon us for a while. A case in point would be the introduction of Radio-Frequency Identification chips (RFID, smaller than a grain of sand, designed to relay ambient information such as humidity, weight, temperature, and to be locatable at all times by certain scanners) into selected items in distribution – spanning football tickets or hotel room access cards, to titles in bookshops, or clothing by major brands, to government documents, to children's passes for some schools, to individual cuts of meat in the Norwegian market. HP were one of the first known to put RFID in their products (in printers from their factory in Brazil) to detect and track items as they moved through the supply chain, and at the time actually won an award for it. Again, Rob van Kranenburg explains further:
....“As RFID is pull technology, the RFID reader emitting energy so that the passive tag gives its unique number (says hello, here I am), the EPC Global network layout makes it possible to track a bottle in your room (provided there is a reader in your door, floor, building) through a simple web query by typing the unique ID number (available through retail channels) as the ID of the bottle is logged into the local database (your computer, work server, office building network) which is hooked up to the EPC Global network. In this database through an RFID scripting language called Savant, into the environment has a deep appeal to us that goes beyond rational motives or socio-cultural reasons. We want to be safe, period. Not so much feel safe as that may change quickly. No, we want to be safe. Safety as the default position and then feel free. Wow. Could that be? AmI [Ambient Intelligence] carries this promise. But can it actually deliver? Just in practical terms, who will pay for the stability of these environments when oil prices go to $300 or more? When climate change causes flooding in large areas? When millions of hungry people start to climb the walls of Fortress Europe?”....

Even from our diminished vantage point, generations within this cell of contemporary lifestyle, can we not see what we'd be losing in a world where technologies automatically check our store cupboards before autonomously placing online orders, communicate with our dentist while we brush our teeth, essentially take the supposedly unreliable humanity out of the loop? And what has already been surrendered to this march, when many now “need” complex technologies to navigate their immediate environment through digital mapping, to simulate their social activity through texting, to moderate their emotions through Netflix, to measure their heartbeat while they exercise, to remind them they are indeed alive. But what a life.

Following on the subject of this rift from the sensuous, you can read in detail the critical analysis on the website *Resistenze al Nanomondo* that preceded the EXPO2015, that was held in Milan this May, of just a few features at the convergence (gathering technological research institutions, corporations and industries, civil society, media, etc.):
....“Beyond the restaurants spread widespread through different pavilions, by nation-states or corporations or international organizations, the venue chosen to set up this scientific-sensory mass experiment and legitimize the techno-

VI

The aforementioned John Manley at HP Labs Bristol imagines that one day *“you might wave your sensor-equipped mobile phone over a plate of food to 'smell' whether any of the ingredients have gone bad.”* The example is telling as to the highly trivial nature of so many of the functions on offer to the majority, which for thousands and millions of years humans have already achieved through basic bodily perception. It is this bodily perception, and the vital powers of experience and interplay they enable, that is under attack today. The generalised deskilling that is to be the outcome is worth dwelling on in some more detail. Rob van Kranenburg once more:

....“Just think back a decade or so. Did you not see cars on pavements and guys (mostly) trying to fix them? Where are they now? They are in professional garages as they all run on software. The guys cannot fix that. Now extrapolate this to your home, the streets you walk and drive on, the cities you roam, the offices in which you work. Can you imagine they would one day simply not function? Not open, close, give heat, air”.....

....“If as a citizen you can no longer fix your own car - which is a quite recent phenomenon - because it is software driven, you have lost more then your ability to fix your own car, you have lost the very belief in a situation in which there are no professional garages, no just in time logistics”....

....“citizens will at some point soon no longer be aware of what we have lost in terms of personal agency. We will get very afraid of any kind of action, and probably also the very notion of change, innovation - resisting anything that will look like a drawback, like losing something, losing functionalities, connectivities, the very stuff that they think is what makes us human. As such Ambient intelligence in its ultimate form of outsourcing human memories …. dispersing yourself as data the item’s log is sent to an Object Name Server (ONS) where it can be accessed via the web, for example from Tokyo”....

....“There is no forgetting, no memory loss in Digital Territory. A world where a layer of digital connectivity has been programmed on all things analogue. Consequently you should not say: “I’m not doing anything wrong, so why should I worry about smart cameras with 3D coordinates reading my face, or this RFID/M2M/NFC infrastructure? No, you should worry about whom will deem what wrong in three years from now, as from the moment of going live all movement will (irrespective of man, machine or animal) be logged, stored and data mined”....

Neither are such advances limited to the Global North:

....“In the year 2000, 47 percent of the world’s population lived in cities. In 2030, 60 percent of the world’s population will live in an urban environment. The growth will occur in less developed [sic] countries, especially in coastal South Asia. More than 58 cities will boast populations of more than five million people. One of these cities will be the aforementioned Song Do City, an “ambient city”, in which all “information systems (residential, medical, business, governmental, etc.) share data, and computers are to be built into the houses, streets and office buildings”. The city itself will exemplify a digital way of life, the “U-life”. This is a city of control”....

....“In Karachi, population-wise the second largest city in the world, with over half of the twenty million people in slums, face recognition and number plate recognition cameras reign sovereign on the highways”....

Britain being global torch-bearers for all kinds of surveillance and tracking, it's already a decade since some workers in warehouses across the prison island, and supplying household-name retailers, began to be fitted with wearable chips to follow

their movements, and from which to receive instruction. Once again, workplace technology not to lighten the load for its captives, but to increase the dehumanising squeeze for higher levels of productivity. Not least by preventing unauthorised breaks, harassing the ones taking longer than calculated by the computer as necessary to complete a job, and reducing pilfering of the merchanise – often itself also tagged. The workers in such battery-farm type units were further reduced to industrial automatons, in what was heralded as the "disappearance of disappearance" (*"where the employee is unable to do anything without the machine knowing"*). We're reminded of John Zerzan's observation:

....“ “The Future Belongs to the Fast” [HP advertisement]. Well, I'd say actually it belongs to the machine; and the faster it goes, the faster you gotta work”....

Around the time this was happening, it was predicted that RFID would become a world-changing technology overnight – however, despite its current applications in retail, logistics, pharmaceuticals and others (and obvious nightmarish potential for more), it didn't really taken off in the way that, say, social media did in that time instead. Currently, with the Internet of Things, RFID manufacturers are posited to have their moment as an critical component of the "Big Data" systems being envisaged; and are pushing hard for further adoption by business and government worldwide. The multinational Disney corporation are just one who are demonstrating *"that RFID tags can be used to cheaply and unobtrusively determine how people use and interact with daily objects, enabling new types of interactive play and smart homes and work environments, as well as new methods for studying consumer shopping habits. According to Disney Research, the investigators found that their system, called IDSense, allowed them to simultaneously track 20 objects in a room and infer four classes of movements*

than many governments – and power beyond only that of their financial capital. By comparison, the applications most of the exploited consumer classes will be able to put the new technologies to will be ones that confirm their role as such, despite the revolutionary claims of Marxist and capitalist technocrats alike. We might be able to soon use our own devices to read the RFID chips on our purchases or apparel, but that in no way compares to the power that is held by the technocrats who survey whole cityscapes; like with most technologies, the power imbalances are inherent from the start. The systems to render our environments more flexible and adaptive carry the single aim to make us more useful to the system; if they facilitate some minor (or inculcated) wants of ours, it is only because the larger social structure is deemed to benefit more. The Internet of Things promises to service and direct us like lone machines, quarantined from the community of life, with the main power and responsibility we are left with being that of pushing buttons from a pre-determined range, to participate in and reproduce this society.

designers and social scientists.) So that we can all keep monotonously producing and consuming to enrich an elite, while the world burns, turning in towards our gadgets and interfaces, and only peering out through our camera-phones, relegating social, environmental and existential crisis to the background.

And should we resist, we are bound to meet those same apparatuses zeroing in upon us – what would the convergences of the so-called “Arab Spring” or the Occupy phenomena (despite their obvious limitations) look like in a Smart City? It seems an almost poetic linkage of control of the wild in the human or non-human realms that SouthWestOne, in addition to offering an Arbortrack database to catalogue and electronically plot all mature trees in a given area, also run the Police Resourcing Unit; for honing technics of mass control at Glastonbury Festival, carnivals, football matches, Royal visits and for operations planning at *“unexpected policing events”* eg. *“riots”* (their words not ours). Or on an even deeper level, how far from the infamous dystopia of Aldous Huxley are we when technocratic control reaches literally inside us; when, for one example, the Proteus ingestible computer sensor that already tracks how some patients take their drugs could report an abnormality and trigger reactions (external or internal) until an uncooperative subject was forced to take their medication, to cheer them up or calm them down? (If this seems unrealistic, consider the swelling “medicalisation” and individualisation of rebellion (*a la* the diagnosis of Oppositional Defiance Disorder and the like) or even of those “at risk” of radicalisation, and psychiatric blackmail frequently raised against a great many of our unrepentant comrades in prisons across the world; like Marco Camenisch, to name but one.)

The tech-industry majors already wield enormous power, larger

with 93 percent accuracy.”

Now, in addition to RFID used to control and monitor access to certain buildings, databases and more, it appears at border crossings, in prisons, below the actual skin of people worried about being lost or kidnapped – as well as in some places to use the office photocopier and communicate with mobile apps via the chip buried in the flesh of the hand, or just to be bodily-scanned to pay for drinks in a nightclub. A gradual hybridisation is underway between human beings and informatic/robotic systems – when not an outright substitution or elimination of the former by the latter – perhaps (for now) best typified by the growing psychological and physical dependence on the internet and mobile phones. Some welcome the possibility of full smartphone controls implanted in their forearm, or computers worn like contact-lenses responding to eye movement. Scientist fanatics succeed in remotely-directing rats via a computer through implants and brain-machine interface, and the impossible transhumanist fantasy of entirely melding us with technology (to the complete exclusion of the non-industrial from our lives) begins to seem judged as less far-fetched in the social climate. After all, this is the direction of the techno-culture.

....“You come home at night. Your smart home recognises you, and automatically adjusts lighting, temperature, ambient sound. Your domestic items chatter among themselves. "What's up?", your computer asks your mobile phone, camera, MP3 and all your smart mobile devices, which provide it with daily data. Your smart fridge notes that you eat the last yogurt, and orders more immediately on the Internet. It offers handy recipes for your provisions. Your children have returned, but you already knew that thanks to the message on your mobile when they scanned their satchel arriving home. They are busy with their electronic rabbit who reads them an intelligent book, scanned with its RFID chip. A glance to one of your screens reassures you of your old mother who lives alone: the sensors securing her smart home do not report anything unusual about her blood pressure and medication consumption. She does not need help. In short, without you, your life unfolds just as it should. It's such a convenience”....

(IBM & the Society of Constraint)

them with a multitude of nano-scale computers, in the ludicrous aim to somehow make them Smarter (or rather, more compatible with civilisation), is to make the world more fixed and standardised.

But only things that can be described in numbers, quantified, allow for standardisation, and life is not just so much information to build up in their vile databases. The hubris of “knowing” a cloud by its moisture content, a vivisectee by their test results, or the happiness of employees by their productive output is not just an error, but a cultural sickness. If we can't understand each of ourselves as one shifting interaction of a web of self-willing yet interlinked creatures, landscapes and energies, if we can't move away from seeing both the non-human world and the wild connective threads running through us as something *external*, as the wayward and fickle Witch to be manfully subdued and interrogated, the essence of what has brought us to this desperate point of climate crisis and social slavery will continue to escape us.

The extreme danger we're now dealing with is that, for many people, technological opiates are over-riding the disaffection or sense of the system's futility at just the moment when long-standing certainties begin to come apart around them (the validity of the democratic process, the existence of the welfare state, the legitimacy of political authorities, perhaps even the concept of limitless growth); as we're ushered from the smoke-belching towers of traditional industrialism (which only increase, overseas and behind the scenes) into the “clean”, hi-tech, re-engineered sterility of our blinkered Virtual Realities. (Initiatives abound, such as those launched at the turn of the millennium like the Ideas Lab collaboration of HP, ST Microelectrics and France Telecom to propagate acceptance of Smarter Planet-type technologies, with help from creative

instrumental vision, such as smell, texture, or relation to context, become trivial awareness with no practical significance. Whereas the reduction of meaning is obvious when applied to Beethoven, it is less so when applied to the natural world since we have been trained to view this world through the lenses of industrialism since infancy. This reduction in meaning is quite typical of the process of colonization in many of its various forms"....

The desire is to fulfill a repackaged variant of the old materialist goal of applying the *"mechanical arts"* to the biosphere, to *"twist the tail of nature"* so that it *"betrays her secrets more fully"* (as that imperial patriarch of reductionist science, Francis Bacon, recommended when comparing his methodology to the wide-spread torture of women and gender non-conformists accused of witchcraft in those times; an explicit discourse that lasted into speech of Nobel Prize winners of the late 20th Century). Yet in the race towards supposed understanding, we are actually plunging into the worst – and potentially fatal – ignorance. While wild life is always in motion, intricate and diverse, the dominant ideology pushes against it. The technological mindset of the industrial era could be seen as more like entrancement than "Enlightenment"; a fixation or induced state of consciousness, to which we could attribute our propensity to ruin the soil, air, water and other basic life necessities. Every culture (that we ourselves know of) that came before or uneasily co-exists with industrial modernity had or has *"a larger vision of the universe, of our place and functioning within it, a vision that extends to celestial regions of space and to interior depths of the human in a manner far exceeding the parameters of our world of technological confinement"* (Thomas Berry). What they hope to achieve by digitally-mapping the deep, inter-locking rhythms that support life on earth and then occupying

V

Could you say there is the same boundary anymore between public and private – in the digital sphere and more? Or between online and offline, when your possessions would be in continual communication with each other, their manufacturers and the authorities? Between city and countryside, when we're already and forever pursued by ambient connections and commitments? Between being at work or away from it, when every datafied interaction or journey is now generating information and thus capital for the corporations? Between surveillance modules and "freedom"?

The reality is, we have been living *inside of* authoritarian technology for generations. However, the present convergence of information technology, cybernetics, nano-technology, neuro-science and bio-technology is more than just an upgrade to the industrial system, it's a fundamental change in the structuring of power-as-domination; and also in the chance to fight against it.

Yet it traces an unmistakable lineage throughout the history of civilisations; those processes of destruction and enslavement that set rulers and ruled apart, while reducing beings and whole land-bases to fuel sources for running a deadly system. The death-urge shared by all civilised cultures has, since at least the industrial revolution and the colonisation by mechanical philosophy, borne more explicitly than ever (within the Western project that now dominates) an impulse to reduce the animate, wild and uncontrollable, into routine, category, and confinement. Simultaneously, all that is "outside" of the technical artifacts of civilised society (that is, what is designated "nature") becomes intellectually defined as a mere "standing reserve" of dead components awaiting consumption, commodified, and transformed into the trash that is impulsively

hyper-produced. And if our quality of life is degrading, we of the long-since industrialised world can at least consume more (that is, more processed lives and bodies of other exploited beings and landscapes), and die of that same poisoned over-abundance.

After centuries of this reification process, nano-biotechnology promises to take us a step further into a "post-ecology" state where the remodeled duplicates of biological processes will outcompete and replace that unruly, unpredictable "outside" that our conceptual acrobatics have made incomprehensible to us – as if the earth were simply a software platform to reverse-engineer. Rather than simply interrupt and destroy environmental cycles and flows, like it always has before, techno-science now promises to *instrumentalise* these same phenomena (now cynically termed "ecosystem services") in the hope of "improving" them; yet is still absolutely dependent and indebted to the same pillage and toxification for its basic component parts. Behind the chatter about Artificial Intelligence and instruments that supposedly understand our emotions, bodily functions and intentions, it's the unspeakable delusion of reality confined to what machines (or people who have begun to think only in their terms) can measure. It is a view of reality where everything is objectified, emptied of subjective quality in favour of quantity, appearing as a clone in a monocrop – a digit in a binary code.

As the Internet of Things is explicitly defined by a regime of instrumentalisation, we would do well to remember what exactly instrumentalisation is. It is the turning of so-called "things" into instruments for further purposes; and when you instrumentalise something you inherently devalue it, you treat it as a thing to be used for a set instrumentalising activity, nothing more. To a large degree this is what "work" in the civilised world is based on, and is now going rampant – we are instrumentalising everything and things cease to have value, instead simply being seen as an instrument. Ultimately this destroys any dignity the non-human world might have to us, as it is invaded and statistic-ised, and now the cycles of rampant mass consumption of the industrial world have taken hold as we make and remake and destroy and consume all that's around us. Any social or spiritual significance of our once-vibrant environment (which in many other cultures is frequently venerated as a value in its own right, protecting it from the most flagrant exploitation because that would be seen as the insanity it is) crumbles under the weight of the distance we develop between ourselves and the world through quantification. Because we became detached from notion of "world as home" by violent enclosure and domestication by empires and priests of days long gone by, at present the earth is something we usually only quantify and measure and rarely appreciate first-hand, in a qualitative way.

This was described by David Kidner as follows:
…."The loss of structure that occurs when we define the natural world in terms of abstract categories has something to do with the obliteration of uniqueness and bioregional particularities: a Cascade Lily is a Cascade Lily, a river is a river, and once you've seen one redwood you've seen 'em all. Just as a Beethoven symphony can be summarized in terms of decibels, pitch, and duration, so the world can be quantified in terms of physical characteristics such as board-feet or cubic feet per second – characteristics that all too easily come to seem fundamental defining attributes. And because this 'subsumption of the particular under universal' is entangled historically with a particular instrumental vision that is widely accepted as "reality," those sensuous and aesthetic characteristics which have little significance within this